



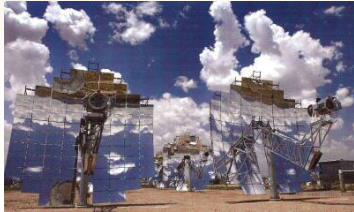
Sandia National Laboratories - Federal Agency Energy Surety Support and Integration Capabilities

**Interagency Energy Management Task Force Meeting
March 18, 2009**

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Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company,
for the United States Department of Energy's National Nuclear Security Administration
under contract DE-AC04-94AL85000.

Sandia Renewable Energy Research and Development Focus Areas



6337
Concentrating Solar
Jeff Nelson



6335
PV and Dist. Gen Testing
Charlie Hanley



6333
Wind Energy
Jose Zayas



6331
Geothermal Research
Doug Blankenship



6336
Storage and Dist. Gen
John Boyes



6332
Energy System Analysis
Juan Torres



6338
Fuels & Fuel Cells
Ellen Stechel

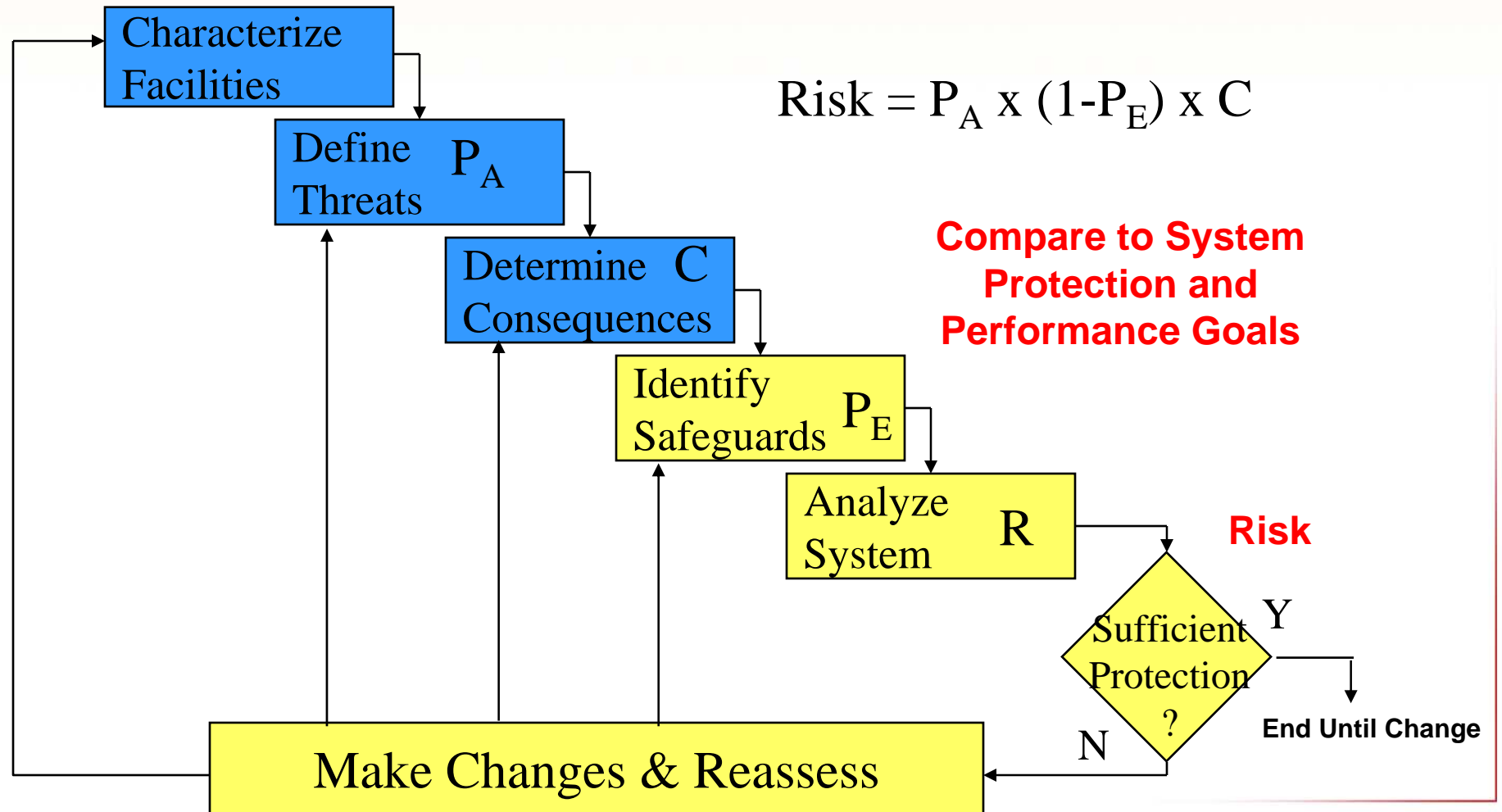


Sandia Energy System Research and Integration Focus

- **Energy System Surety**
 - Improve energy system safety, security, reliability
 - Grid-tied and/or islanded control and operations of distributed generation
 - Utility and facility-scale system design, engineering, and implementation
- **Integration of all energy resources**
 - Renewable, fossil, nuclear
 - Distributed (<3Mw) or grid-scale (>5Mw) applications
- **Experience with a range of federal agencies**
 - DoD, Park Service, USCG, BoR, BPA, TVA, BLM, etc.....



Sandia Risk Assessment Approach to Energy System Improvements



Sandia Distributed Energy Technology Lab

Integration Testing and Evaluation

Center for
Control System
Security



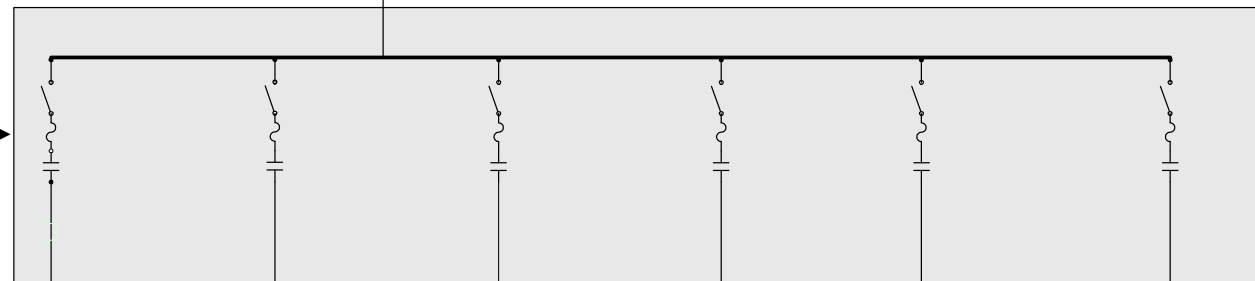
Remote
DER sites



Grid



480V Microgrid



Various Loads



Distributed Energy Resources



New DOE/Sandia Initiatives of Interest to Federal Agencies

- **Solar Energy Grid Integration System (SEGIS)**
 - Research and development of next generation solar energy management, communications, and load control
- **Solar America Initiative (w/NREL)**
 - Three major areas – showcases, cities, government installations
 - Assistance for technology decisions, financing, grid integrations, storage, etc.
- **DOE/DoD Microgrid Development**
 - Support military bases in developing conceptual designs for energy surety microgrids

